

SEQUENCE LISTING

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Shan, Simei
Lu, Zhixian

<120> Enhancement of Peptide Cellular Uptake

<130> 8321-68

<140>
<141>

<150> 60/128,202

<151> 1999-04-07

<160> 58

<170> PatentIn Ver. 2.1

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

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Asn Leu Trp Ala Ala Gln Arg Tyr Gly Arg Glu Leu Arg Arg Met Ser
1 5 10 15

Asp Glu Phe Glu Gly Ser Phe Lys Gly Leu
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segment from BH3 domain of a Bcl-2 superfamily

polypeptide

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Asn Leu Trp Ala Ala Gln Arg Tyr Gly Arg Glu Leu Arg Arg Met Ser
1 5 10 15

Asp Glu Phe Glu Gly Ser Phe Lys Gly Leu
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<210> 3

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<213> Artificial Sequence

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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

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Asn Leu Trp Ala Ala Gln Arg Tyr Gly Arg Glu Leu Arg Arg Met Ser
1 5 10 15

Asp Glu Phe Glu Gly Ser Phe Lys Gly Leu Pro
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<210> 4

<211> 27

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 4

Pro Ser Ser Thr Met Gly Gln Val Gly Arg Gln Leu Ala Ile Ile Gly
1 5 10 15

Asp Asp Ile Asn Arg Arg Tyr Asp Ser Glu Phe
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<210> 5

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 5

Pro Asn Ser Ile Leu Gly Gln Val Gly Arg Gln Leu Ala Leu Ile Gly
1 5 10 15

Asp Asp Ile Asn Arg Arg Tyr Asp Thr Glu Phe

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<210> 6

<211> 27

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 6

Gln Asp Ala Ser Thr Lys Lys Leu Ser Glu Cys Leu Lys Arg Ile Gly
1 5 10 15

Asp Glu Leu Asp Ser Asn Met Glu Leu Gln Arg

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<210> 7

<211> 27

<212> PRT

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 7

Gln Asp Ala Ser Thr Lys Lys Leu Ser Glu Cys Leu Arg Arg Ile Gly
1 5 10 15

Asp Glu Leu Asp Ser Asn Met Glu Leu Gln Arg
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<210> 8
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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 8
Leu Arg Pro Ala Pro Pro Gly Val His Leu Ala Leu Arg Gln Ala Gly
1 5 10 15

Asp Glu Phe Ser Arg Arg Tyr Gln Arg Asp Phe
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<210> 9
<211> 27
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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

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Leu Ser Pro Val Pro Pro Val Val His Leu Thr Leu Arg Gln Ala Gly
1 5 10 15

Asp Asp Phe Ser Arg Arg Tyr Arg Arg Asp Phe
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<210> 10
<211> 27
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily

U.S. GOVERNMENT WORKS - NOT PROPRIETARY OR TRADEMARKED

polypeptide

<400> 10
Leu Ser Pro Val Pro Pro Cys Val His Leu Thr Leu Arg Arg Ala Gly
1 5 10 15

Asp Asp Phe Ser Arg Arg Tyr Arg Arg Asp Phe
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<210> 11
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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 11
Leu Ser Pro Val Pro Pro Val Val His Leu Thr Leu Arg Arg Ala Gly
1 5 10 15

Asp Asp Phe Ser Arg Arg Tyr Arg Arg Asp Phe
20 25

<210> 12
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segment from BH3 domain of a Bcl-2 superfamily
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<400> 12
Glu Ile Val Arg Ala Ser Asp Val Arg Gln Ala Leu Arg Asp Ala Gly
1 5 10 15

Asp Glu Phe Glu Leu Arg Tyr Arg Arg Ala Phe
20 25

<210> 13
<211> 27

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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 13

Glu Val Ile Pro Met Ala Ala Val Lys Gln Ala Leu Arg Glu Ala Gly
1 5 10 15

Asp Glu Phe Glu Leu Arg Tyr Arg Arg Ala Phe

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<210> 14

<211> 27

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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 14

Gln Glu Asp Ile Ile Arg Asn Ile Ala Arg His Leu Ala Gln Val Gly
1 5 10 15

Asp Ser Met Asp Arg Ser Ile Pro Pro Gly Leu

20 25

<210> 15

<211> 27

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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 15

Gln Glu Glu Ile Ile His Asn Ile Ala Arg His Leu Ala Gln Ile Gly
1 5 10 15

Asp Glu Met Asp His Asn Ile Gln Pro Thr Leu

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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 16

Cys Met Glu Gly Ser Asp Ala Leu Ala Leu Arg Leu Ala Cys Ile Gly
1 5 10 15

Asp Glu Met Asp Val Ser Leu Arg Ala Pro Arg

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<210> 17

<211> 27

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 17

Arg Ser Ser Ala Ala Gln Leu Thr Ala Ala Arg Leu Lys Ala Leu Gly
1 5 10 15

Asp Glu Leu His Gln Arg Thr Met Trp Arg Arg

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<210> 18

<211> 27

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segment from BH3 domain of a Bcl-2 superfamily

polypeptide

<400> 18

Arg Trp Ala Ala Ala Gln Val Thr Ala Leu Arg Leu Gln Ala Leu Gly
1 5 10 15

Asp Glu Leu His Arg Arg Ala Met Arg Arg Arg
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<210> 19

<211> 27

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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 19

Asp Met Arg Pro Glu Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly
1 5 10 15

Asp Glu Phe Asn Ala Tyr Tyr Ala Arg Arg Val
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<210> 20

<211> 27

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 20

Leu Gln Met Leu Lys Gly Glu Lys Leu Gln Val Leu Lys Gly Thr Gly
1 5 10 15

Asp Trp Trp Leu Ala Arg Ser Leu Val Thr Gly
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<210> 21

<211> 27

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 21

Pro Gly Gly Arg Leu Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly
1 5 10 15

Asp Glu Leu Glu Gln Ile Arg Pro Ser Val Tyr
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<210> 22

<211> 27

<212> PRT

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 22

Asp Ile Glu Arg Arg Lys Glu Val Glu Ser Ile Leu Lys Lys Asn Ser
1 5 10 15

Asp Trp Ile Trp Asp Trp Ser Ser Arg Pro Glu
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<210> 23

<211> 27

<212> PRT

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 23

Ile Ser Ser Ile Gly Tyr Glu Ile Gly Ser Lys Leu Ala Ala Met Cys
1 5 10 15

Asp Asp Phe Asp Ala Gln Met Met Ser Tyr Ser
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<210> 24
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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 24
Glu Gly Pro Ala Ala Asp Pro Leu His Gln Ala Met Arg Ala Ala Gly
1 5 10 15

Asp Glu Phe Glu Thr Arg Phe Arg Arg Thr Phe
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<210> 25
<211> 27
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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 25
Ser Gly Ala Thr Ser Arg Lys Ala Leu Glu Thr Leu Arg Arg Val Gly
1 5 10 15

Asp Gly Val Gln Arg Asn His Glu Thr Val Phe
20 25

<210> 26
<211> 27
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segment from BH3 domain of a Bcl-2 superfamily

polypeptide

<400> 26

Ala Ala Leu Pro Pro Ser Ala Thr Ala Ala Glu Leu Arg Arg Ala Ala
1 5 10 15

Ala Glu Leu Glu Arg Arg Glu Arg Pro Phe Phe
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<210> 27

<211> 27

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 27

Met Phe Asp Val Glu Met His Thr Ser Arg Asp His Ser Ser Gln Ser
1 5 10 15

Glu Glu Glu Val Val Glu Gly Glu Lys Glu Val
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<210> 28

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 28

Gln Arg Tyr Gly Arg Glu Leu Arg Arg Met Ser Asp Glu Phe Glu Gly
1 5 10 15

<210> 29

<211> 16

<212> PRT

<213> Artificial Sequence

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<220>

<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 29

Gln Arg Tyr Gly Arg Glu Leu Arg Arg Met Ser Asp Glu Phe Val Asp
1 5 10 15

<210> 30

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 30

Gly Gln Val Gly Arg Gln Leu Ala Ile Ile Gly Asp Asp Ile Asn Arg
1 5 10 15

<210> 31

<211> 16

<212> PRT

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<220>

<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 31

Gly Gln Val Gly Arg Gln Leu Ala Leu Ile Gly Asp Asp Ile Asn Arg
1 5 10 15

<210> 32

<211> 16

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily

EPA/NCBI/Protein/Sequence

polypeptide

<400> 32

Lys Lys Leu Ser Glu Cys Leu Lys Arg Ile Gly Asp Glu Leu Asp Ser
1 5 10 15

<210> 33

<211> 16

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 33

Lys Lys Leu Ser Glu Cys Leu Arg Arg Ile Gly Asp Glu Leu Asp Ser
1 5 10 15

<210> 34

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segment from BH3 domain of a Bcl-2 superfamily
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<400> 34

Lys Lys Leu Ser Glu Cys Leu Lys Arg Ile Arg Asp Glu Leu Asp Ser
1 5 10 15

<210> 35

<211> 16

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 35

Pro Gly Val His Leu Ala Leu Arg Gln Ala Gly Asp Glu Phe Ser Arg
1 5 10 15

<210> 36

<211> 16

<212> PRT

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 36

Pro Val Val His Leu Thr Leu Arg Gln Ala Gly Asp Asp Phe Ser Arg
1 5 10 15

<210> 37

<211> 16

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 37

Pro Cys Val His Leu Thr Leu Arg Arg Ala Gly Asp Asp Phe Ser Arg
1 5 10 15

<210> 38

<211> 16

<212> PRT

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<220>

<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 38

Pro Val Val His Leu Thr Leu Arg Arg Ala Gly Asp Asp Phe Ser Arg
1 5 10 15

<210> 39
<211> 16
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<220>
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Artificial Sequence : Peptide segment from BH3
domain of a Bcl-2 superfamily polypeptide

<400> 39
Ser Asp Val Arg Gln Ala Leu Arg Asp Ala Gly Asp Glu Phe Glu Leu
1 5 10 15

<210> 40
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<220>
<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 40
Ala Ala Val Lys Gln Ala Leu Arg Glu Ala Gly Asp Glu Phe Glu Leu
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<210> 41
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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 41
Arg Asn Ile Ala Arg His Leu Ala Gln Val Gly Asp Ser Met Asp Arg
1 5 10 15

<210> 42
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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 42

His Asn Ile Ala Arg His Leu Ala Gln Ile Gly Asp Glu Met Asp His
1 5 10 15

<210> 43

<211> 16

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<223> Description of Artificial Sequence: Peptide
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polypeptide

<400> 43

Asp Ala Leu Ala Leu Arg Leu Ala Cys Ile Gly Asp Glu Met Asp Val
1 5 10 15

<210> 44

<211> 16

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 44

Gln Leu Thr Ala Ala Arg Leu Lys Ala Leu Gly Asp Glu Leu His Gln
1 5 10 15

<210> 45

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segment from BH3 domain of a Bcl-2 superfamily
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<400> 45
Gln Val Thr Ala Leu Arg Leu Gln Ala Leu Gly Asp Glu Leu His Arg
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<210> 46
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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 46
Ile Trp Ile Ala Gln Glu Leu Arg Arg Ile Gly Asp Glu Phe Asn Ala
1 5 10 15

<210> 47
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polypeptide

<400> 47
Gly Glu Lys Leu Gln Val Leu Lys Gly Thr Gly Asp Trp Trp Leu Ala
1 5 10 15

<210> 48
<211> 16
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segment from BH3 domain of a Bcl-2 superfamily

polypeptide

<400> 48

Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Asp Glu Leu Glu Gln
1 5 10 15

<210> 49

<211> 16

<212> PRT

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 49

Lys Glu Val Glu Ser Ile Leu Lys Lys Asn Ser Asp Trp Ile Trp Asp
1 5 10 15

<210> 50

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 50

Tyr Glu Ile Gly Ser Lys Leu Ala Ala Met Cys Asp Asp Phe Asp Ala
1 5 10 15

<210> 51

<211> 16

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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 51

Asp Pro Leu His Gln Ala Met Arg Ala Ala Gly Asp Glu Phe Glu Thr
1 5 10 15

<210> 52
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<400> 52
Arg Lys Ala Leu Glu Thr Leu Arg Arg Val Gly Asp Gly Val Gln Arg
1 5 10 15

<210> 53
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<213> Artificial Sequence

<220>
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segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 53
Ser Ala Thr Ala Ala Glu Leu Arg Arg Ala Ala Ala Glu Leu Glu Arg
1 5 10 15

<210> 54
<211> 16
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<223> Description of Artificial Sequence: Peptide
segment from BH3 domain of a Bcl-2 superfamily
polypeptide

<400> 54
Met His Thr Ser Arg Asp His Ser Ser Gln Ser Glu Glu Glu Val Val
1 5 10 15

<210> 55
<211> 28
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Peptide segment from BH3 domain of a Bcl-2 superfamily polypeptide

<400> 55
Lys Asn Leu Trp Ala Ala Gln Arg Tyr Gly Arg Glu Leu Arg Arg Met
1 5 10 15

Ser Asp Glu Phe Glu Gly Ser Phe Lys Gly Leu Lys
20 25

<210> 56
<211> 27
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<223> Description of Artificial Sequence: Peptide segment from BH3 domain of a Bcl-2 superfamily polypeptide

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Lys Asn Leu Trp Ala Ala Gln Arg Tyr Gly Arg Glu Leu Arg Arg Met
1 5 10 15

Ser Asp Glu Phe Glu Gly Ser Phe Lys Gly Leu
20 25

<210> 57
<211> 17
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Peptide segment from BH3 domain of a Bcl-2 superfamily polypeptide

<400> 57
Lys Gly Gln Val Gly Arg Gln Leu Ala Ile Ile Gly Asp Asp Ile Asn

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5

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15

Arg

<210> 58

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Leu to Ala
mutant of SEQ ID NO:30

<400> 58

Gly Gln Val Gly Arg Gln Ala Ala Ile Ile Gly Asp Asp Ile Asn Arg

1

5

10

15

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100